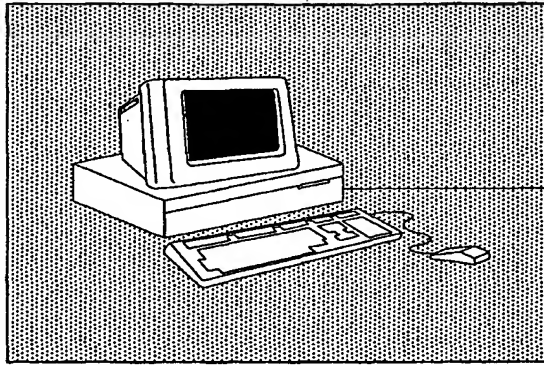


FIG. 1

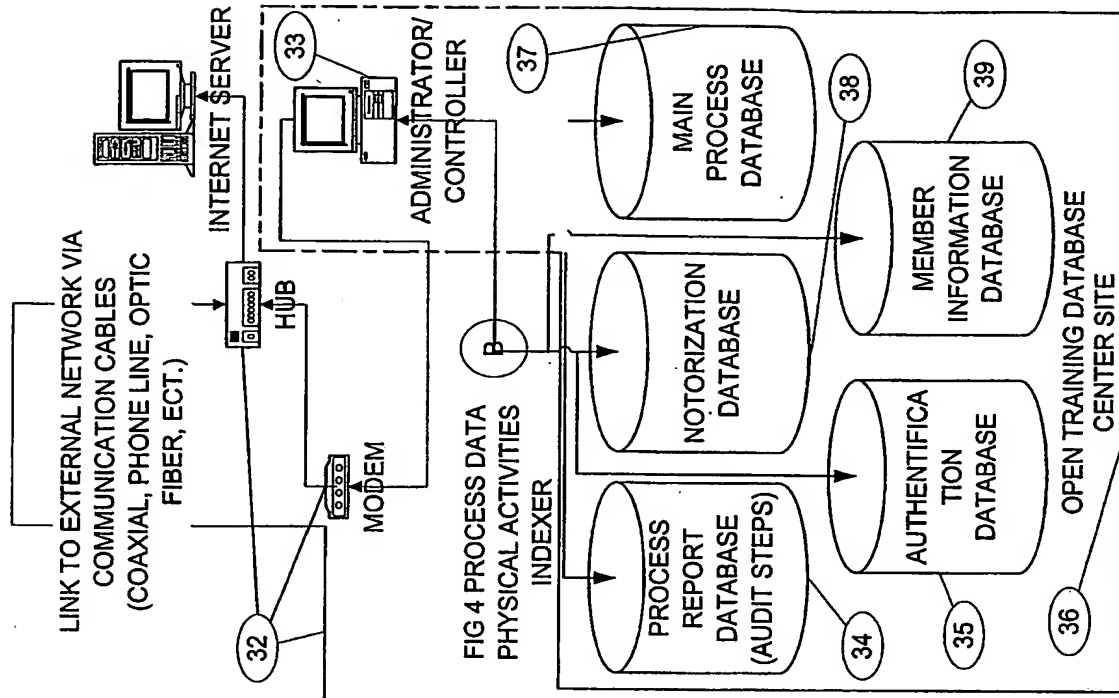
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LINK TO EXTERNAL NETWORK VIA  
COMMUNICATION CABLES  
(COAXIAL, PHONE LINE, OPTIC  
FIBER, ECT.)



MEMBER SITE

FIG. 2



**FIG. 3**

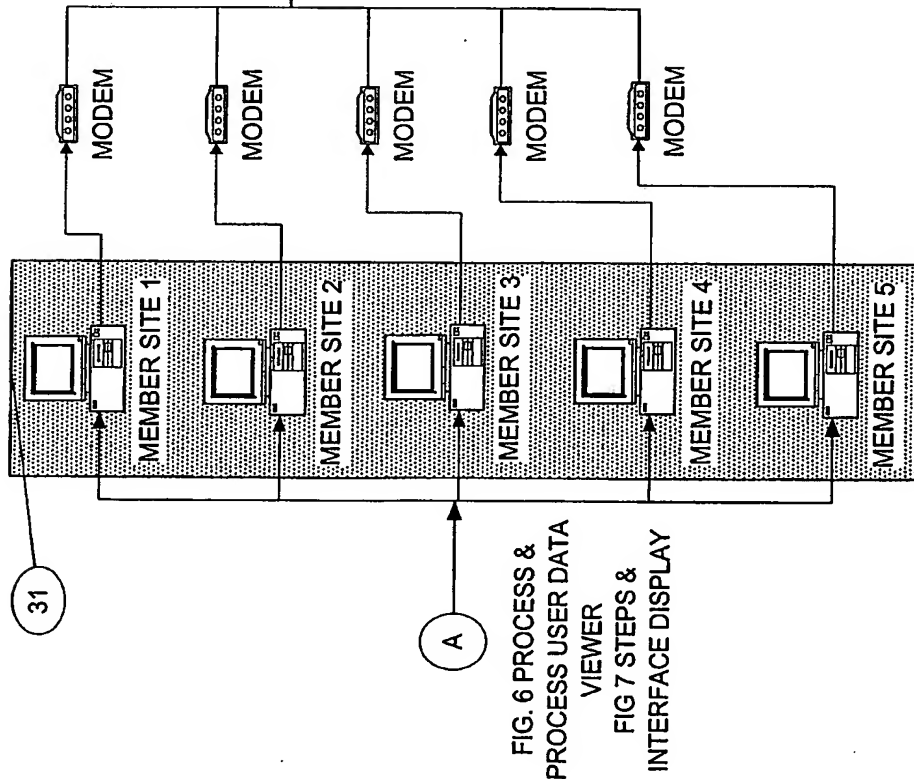


FIG. 6 PROCESS &  
PROCESS USER DATA  
VIEWER

FIG 7 STEPS &  
INTERFACE DISPLAY

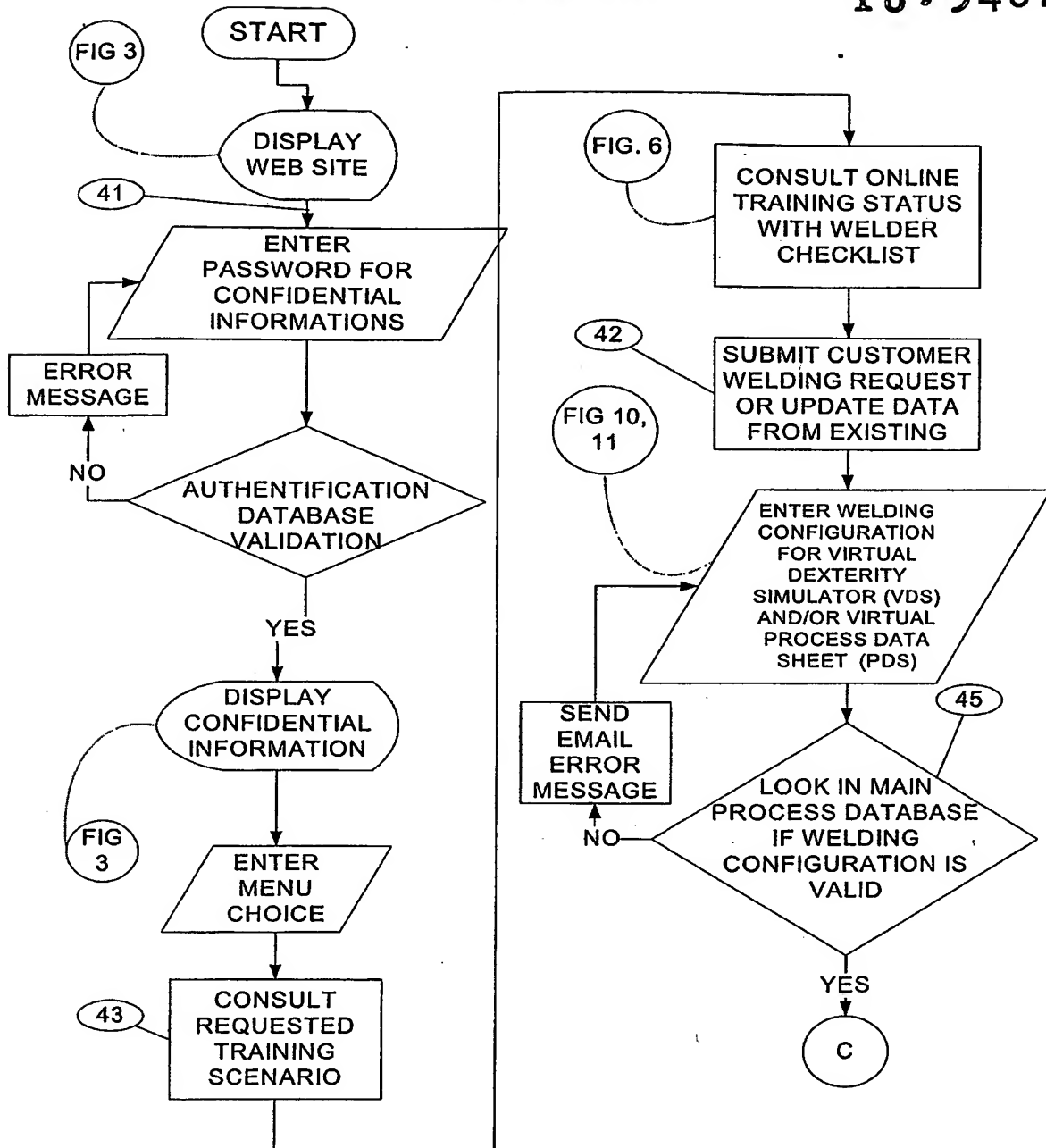


FIG. 4

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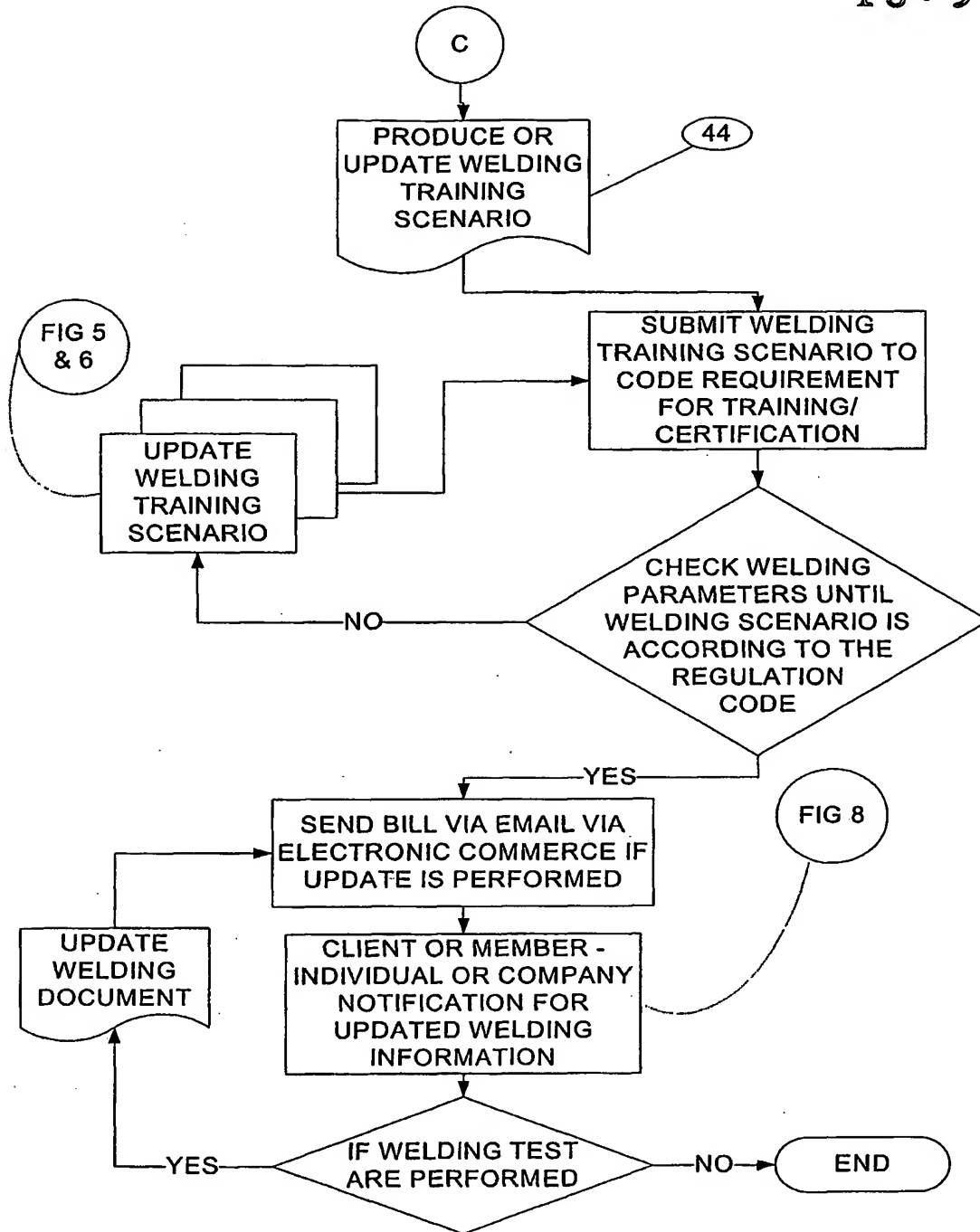
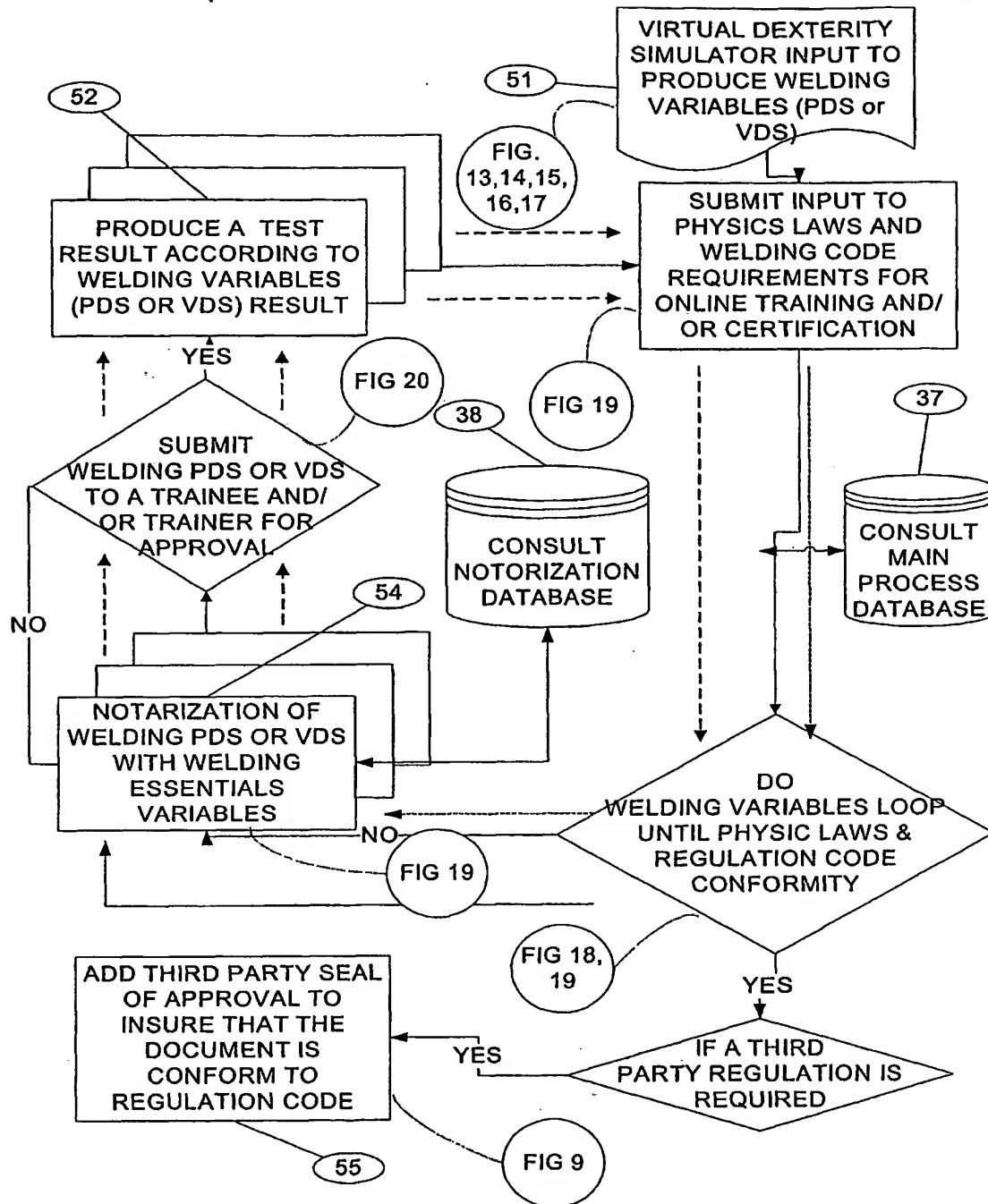


FIG. 4 (Continuity)



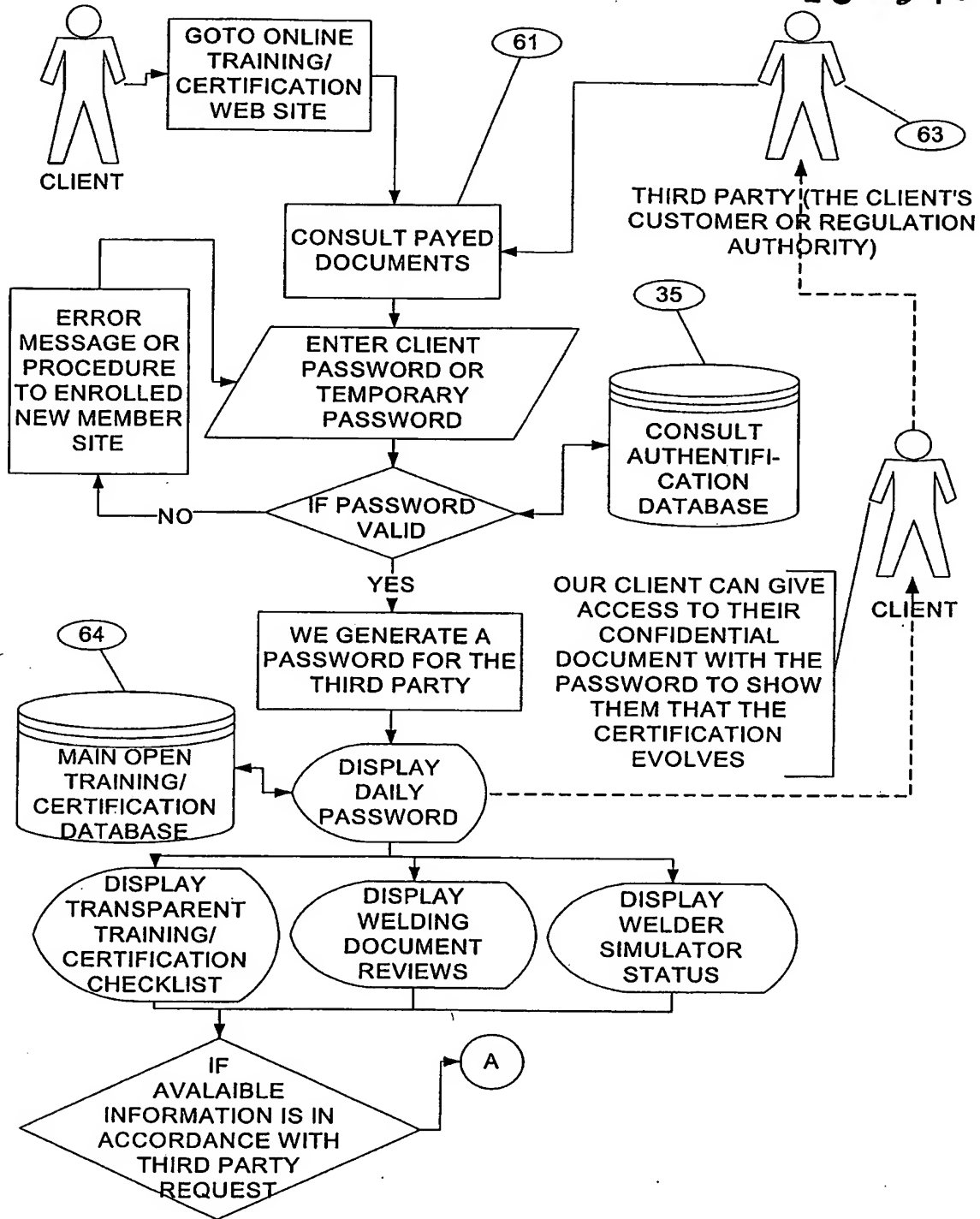


FIG. 6

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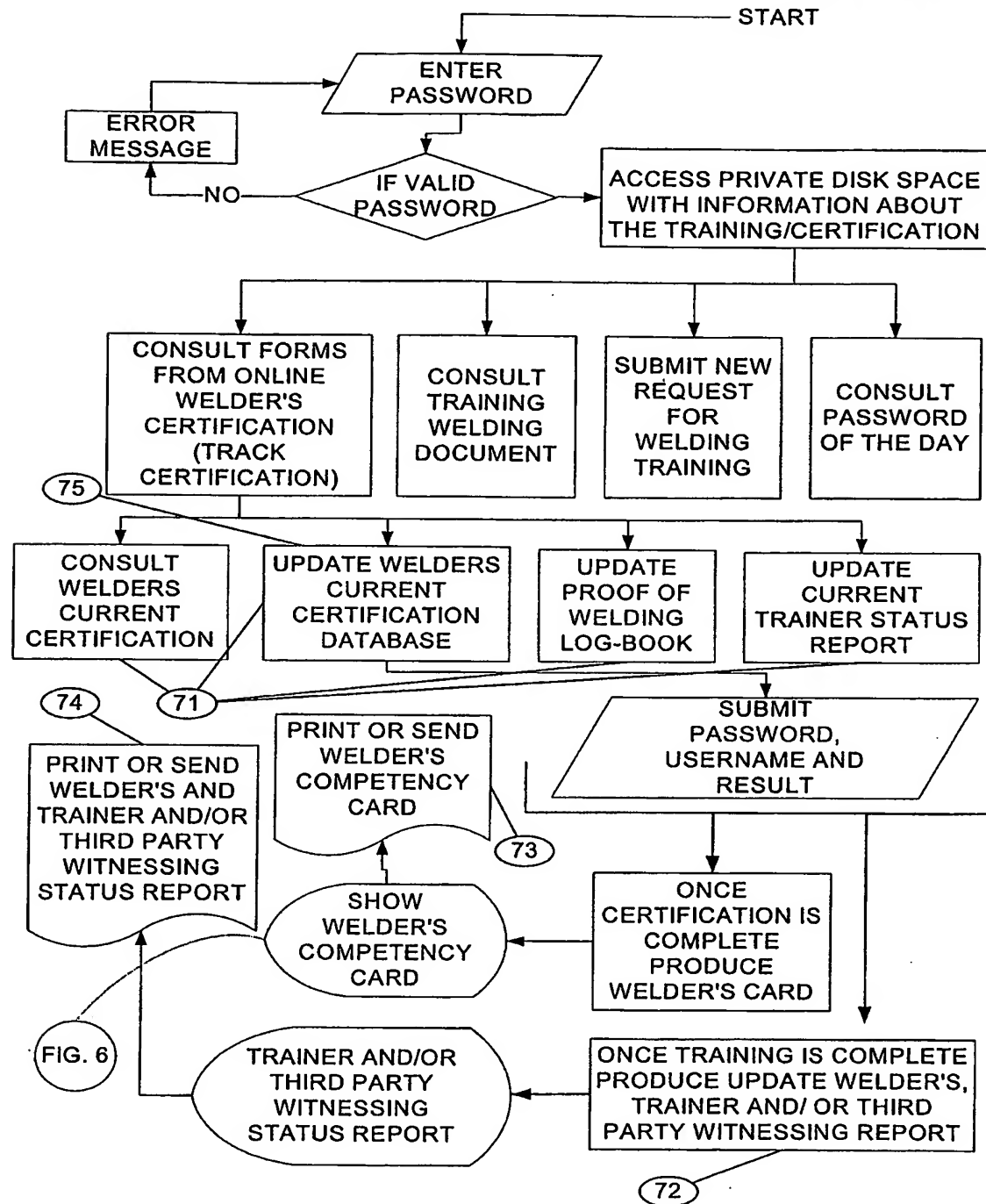


FIG. 7



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YOUR LOGO, YOUR COMPANY		CARD NO 0472-2	WELDER & WELDING OPERATOR QUALIFICATION REPORT CERTIFIED COMPLIANT OF THE CODE: AWS D1.1	
CARD HOLDER	81	WELDER'S NAME	TEST BY	84
EMISSION DATE	JUNE 13 2004	JUNE 13 2004	DATE OF APPROBATION	85
EXPIRATION DATE	JUNE 13 2003	JUNE 13 2003	82	
PROCESS		GMAW	APPROVED BY:	SUPERVISER'S NAME
POSITION		FLAT		
ELECTRODE/FILLER METAL		ER480-S6	83	
MINIMUM PERMITTED THK		5/8"	SUPERVISER	HOLDER'S SIGNATURE

FIG. 8

EVOLUTION OF THE ONLINE CERTIFICATION			
WELDER NAME			
BASE METAL :		FILLER METAL:	
DATE :		WELDER TEST REF.:	
ITEM NO	OPERATION	RESP.	DIGITAL PRINT
1	GET THE BASE METAL ACCORDING TO THE CODE TEST	AW	UPDATE
2	GET THE FILLER METAL ACCORDING TO THE CODE TEST	AW	UPDATE
3	REVIEW THE WELDING DATA SHEET WITH THE WELDING ENGINEER	WE	UPDATE
4	PREPARATION OF THE ASSEMBLY (CHAMFERING AND TACKING)	AW	UPDATE
5	PUNCH THE ASSEMBLY	AW	UPDATE
6	GET IN CONTACT WITH THE WELDING ENGINEER	AW	UPDATE
7	VERIFICATION OF THE PREPARATION BY THE	AW	UPDATE
16	- BENDING		
17	- EVALUATION OF THE RESULTS	AW	UPDATE
18	ACCEPTED <input type="checkbox"/> REFUSED <input type="checkbox"/>	WE	UPDATE
19	IF TEST BY X-RAY ACCEPTED <input type="checkbox"/> REFUSED <input type="checkbox"/>	LABO	UPDATE
20	ASSESSMENT OF THE RESULTS BY THE RESPONSIBLE PERSON	AW	UPDATE
21	TRANSCRIBE THE RESULTS ON THE B AND D FORMS	AW	UPDATE
22	TRANSMISSION OF THE RESULTS TO THE DIFFERENT INTERVENING PARTIES	AW	UPDATE

CERTIFICATION STATUS DATED OF: 04-02-26 09:58:22

LEGEND : W: WELDER; WE: WELDING ENGINEER; AW: AUTHORIZED WORKER; LABO: LABORATORY

94

95

96

97

FIG. 9

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WELDING DATA SHEET		NO: F7-1 B1 12 25-5		SECTION ...3.0..... PART .E480XT-9 CH. PAGE ..... DATE ...june 20 2001 REVISION ...0.....				
<p style="text-align: center;">COMPLETE PENETRATION</p> <p style="text-align: center;">G = 0 mm Rf = 3 mm</p> <p style="text-align: center;">102</p> <p style="text-align: center;">1</p> <p style="text-align: center;">2</p> <p style="text-align: center;">B-U7-FC (X)</p> <p style="text-align: center;">104</p> <p style="text-align: center;">TYPE OF JOINT BUTT JOINT U-GROOVE WITH BACK GOUGING</p>			<p style="text-align: center;">MATERIAL STEEL</p> <p>BASE METAL TABLE 11.1 GR. 1,2,3, CODE CSA W59</p> <p>FILLER METAL E4802T-9 CH</p> <p>FILLER METAL-GAS COMBINATION SEE NOTE 6</p> <p>GAS: 15-25 L/MIN (35-50 CFH) 103</p> <p>GAS: 75% Argon + 25% CO2</p> <p>WELDING PROCEDURE (SECTION 2.0)</p> <p>PROCESS FCAW SEMI-AUTOMATIC</p> <p>CURRENT CC(ELEC +) STICK-OUT 15-25</p> <p>POSITION FLAT</p> <p>PREHEAT NONE, PAR. 2-2-10 TAB 5.3 W59</p> <p>BACK GOUGING FOR JCP APPLICABLE (1)</p>					
T MM (IN.)	FIG NO	LAYER NO (2)	PASS NO (2)	ELECTRODE DIAM. MM (IN.)	AMPERES	VOLTS	WELDING SPEED MM (IN.)/MIN	WIRE SPEED DEPOSITION (IN./MIN) (LB/HRS)
15 (5/8)	1	1	1	1.2	300-370	26-30	250-325 (10-13)	445 11.46
25 (1)	2	1-3 4	1-3-5-7-9 2-4-6-8	"	300-370	26-30	200-300 (09-12)	445 11.46
FOR ALL	2	2	A	"	"	"	200-300 (09-12)	" "
<p>NOTE (1): THE WELDING SPEED IS GIVEN AS A REFERENCE OR A GUIDE BECAUSE IT IS FUNCTION OF CURRENT, VOLTAGE AND SIZE OF WELD REQUIRED OR DEPOSITED.</p> <p>GO TO PARA 2.2.12 FOR ALLOWED RANGE.</p> <p>(2): THE NUMBER OF PASSES AND LAYERS CAN BE GREATER AND IS ADJUSTED WHEN REQUIRED DEPENDING OF THE NEEDS FOR INTERMEDIATES DIMENSIONS. VOIR PARA 2.2.12 FOR ALLOWED RANGE.</p> <p>(3): GO TO PARA 2.2.12 FOR THE ALLOWABLE RANGE IN VARIABLES (AMPS., VOLT, GAS).</p> <p>(4): GO TO PARA 2.2.12 FOR WELDING TECHNIQUE</p> <p>(5): THE WELDING SPEED IS AN AVERAGE VALUE FOR ALL PASSES OF EACH SIDE.</p> <p>(6): THE FILLER METAL - GAS COMBINATION MUST BE APPROVED.</p>								

FIG. 10

SUBSTITUTE SHEET (RULE 26)

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Welding data sheet		2003-11-15	
		Material:	Aluminum
		Welding process:	W592
		Base metal:	6061 T4
		Electrode type:	4043
		Gas:	100% Ar
		Gas:	15-25 l/min (35-50 CFH)
		Welding process:	GMAW
		Current:	cc (Elec +)
		Stick-out:	12
		Position:	Flat
Pre-heat:	T > 10°C (50°F) et T < 65°C (150°F)		
Back gouging for JCP:	N/A		
Cleaning:	N/A		
Travel angle:	5 degrees (push)		
Work angle 45°			
Save into the database			
Joint type:	T joint		
Gap:	0		
S	Layer	Pass	Filler metal
14	1	1	1.2 mm
Amps 125		Volts 22	
112 - 137		20 - 24	
Wire speed 200 fpm		Metaling rate	
198 - 202		2.49	
X: 225 Y: 214		Chronometer (sec): 2.3	
Restart		Numeric results	
Graphic results			

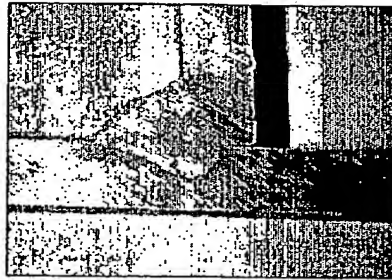


FIG 12

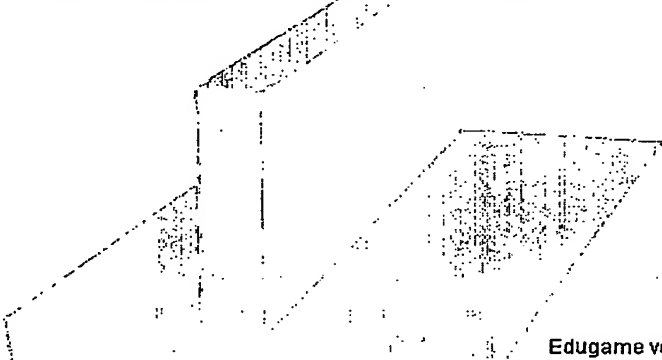

Base metal	Aluminum 6061
Welding process	GMAW
Filler metal	4043
Thickness	0.045" (1.2mm)
Wire speed	240 ipm
Amps	151 amps
Volts	23 volts
Stick-out:	12
Work angle	45
Travel angle:	-5 degrees (push)
<div>Restart the welding</div> <div>See results</div>	
 <p>Edugame version 0.1</p>	
X Coord.: 0 Y Coord.: 0 Chronometer (sec): 0.00 Speed (p/min): 0	

FIG 13

Base metal	Aluminum 6061
Welding process	GMAW
Filler metal	4043
Thickness	0.045" (1.2mm)
Wire speed	240 ipm
Amps	151 amps
Volts	23 volts
Stick-out:	12
Work angle	45
Travel angle:	-5 degrees (push)
Restart the welding	See results



Edugame version 0.1

X Coord.: 0 Y Coord.: 0 Chronometer (sec): 0.00 Speed (p/min): 0

FIG 14

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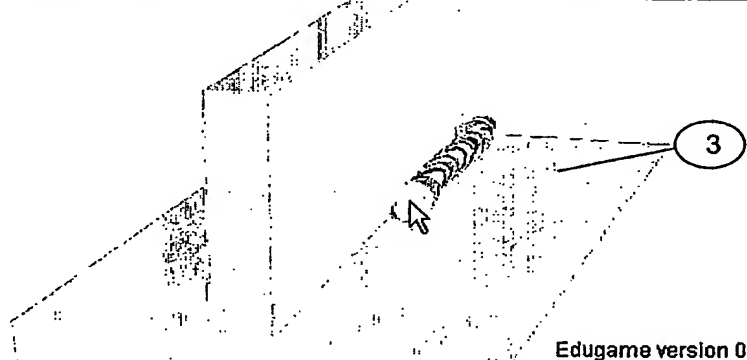
Base metal	Aluminum 6061
Welding process	GMAW
Filler metal	4043
Thickness	0.045" (1.2mm)
Wire speed	240 lpm
Amps	151 amps
Volts	23 volts
Stick-out:	12
Work angle	45
Travel angle:	-5 degrees (push)
<div>Restart the welding</div> <div>See results</div>	
 <p>Edugame version 0.1</p>	
X Coord.: 283 Y Coord.: 132 Chronometer (sec): 1.5 Speed (p/min): 0	

FIG 15



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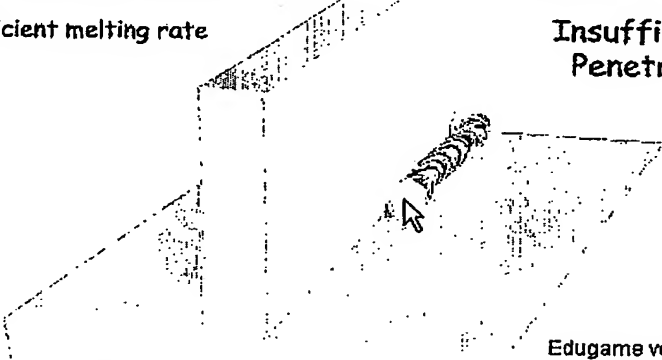
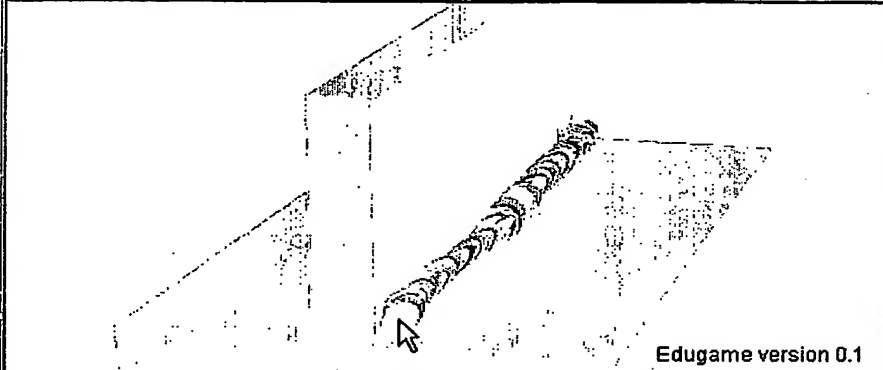
Base metal	Aluminum 6061
Welding process	GMAW
Filler metal	4043
Thickness	0.045" (1.2mm)
Wire speed	240 lpm
Amps	151 amps
Volts	23 volts
Stick-out:	12
Work angle	45
Travel angle:	-5 degrees (push)
<div>Restart the welding</div> <div>See results</div>	
<div>Insufficient melting rate</div> <div>Insufficient Penetration</div>  <div>Edugame version 0.1</div>	
X Coord.: 283 Y Coord.: 132 Chronometer (sec): 1.5 Speed (p/min): 0	

FIG 16

Base metal	Aluminum 6061
Welding process	GMAW
Filler metal	4043
Thickness	0.045" (1.2mm)
Wire speed	240 ipm
Amps	151 amps
Volts	23 volts
Stick-out:	12
Work angle	45
Travel angle:	5 degrees (push)
4 Restart the welding	2 See results



Edugame version 0.1

X Coord.: 275 Y Coord.: 161 Chronometer (sec): 2.9 Speed (p/min): 0

FIG 17

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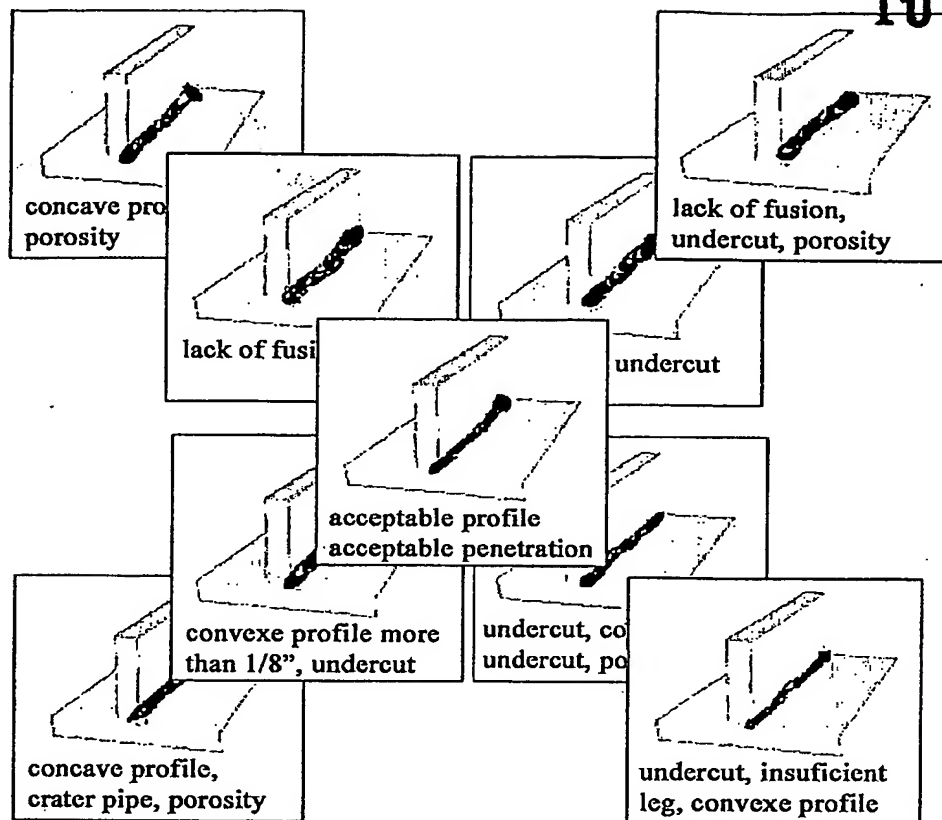


FIG 18

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Welding results													
Ellipse X	Ellipse Y	Ellipse height	Ellipse width	Arc speed	Min. Weight	Weight	Max. weight	Weight OK	Surface Fusion	Surface	Penetration	Penetration OK	
317.0	81.0	28.27981238...	15.6913635...	14	0.04256875	0.04149...	0.1457728...	Incorrect	0.077836488...	0.030465...	2.3667558551...	Sufficient	
317.0	82.0	28.27981238...	15.6913635...	14	0.04256875	0.04149...	0.1457728...	Incorrect	0.077836488...	0.030465...	2.3667558551...	Sufficient	
316.0	93.0	23.48139953...	18.8978861...	0	0.01418868	0.04149...	0.1152576...	Correct	3.897454294...	0.091398...	1.7946064688...	Insufficient	
316.0	93.0	22.87844284...	19.3959361...	0	0.01064218	0.04149...	0.1114432...	Correct	21.23038182...	0.121881...	1.6328483930...	Insufficient	
315.0	95.0	32.35724241...	13.7140492...	22	0.06689375	0.04149...	0.1719287...	Incorrect	0.028690683...	0.019387...	2.4546806337...	Sufficient	
314.0	96.0	32.35724241...	13.7140492...	22	0.06689375	0.04149...	0.1719287...	Incorrect	0.028690683...	0.019387...	2.4546806337...	Sufficient	
313.0	97.0	32.35724241...	13.7140492...	22	0.06689375	0.04149...	0.1719287...	Incorrect	0.028690683...	0.019387...	2.4546806337...	Sufficient	
313.0	98.0	32.35724241...	13.7140492...	22	0.06689375	0.04149...	0.1719287...	Incorrect	0.028690683...	0.019387...	2.4546806337...	Sufficient	
312.0	98.0	34.38375771...	12.9057684...	26	0.07905625	0.04149...	0.1850066...	Incorrect	0.021889105...	0.016404...	2.4724700618...	Sufficient	
311.0	100.0	34.38375771...	12.9057684...	26	0.07905625	0.04149...	0.1850066...	Incorrect	0.021889105...	0.016404...	2.4724700618...	Sufficient	
311.0	101.0	28.27981238...	15.6913635...	14	0.04256875	0.04149...	0.1457728...	Incorrect	0.077836488...	0.030465...	2.3667558551...	Sufficient	
310.0	102.0	28.27981238...	15.6913635...	14	0.04256875	0.04149...	0.1457728...	Incorrect	0.077836488...	0.030465...	2.3667558551...	Sufficient	
309.0	104.0	28.27981238...	15.6913635...	14	0.04256875	0.04149...	0.1457728...	Incorrect	0.077836488...	0.030465...	2.3667558551...	Sufficient	
307.0	105.0	35.39397963...	12.5374094...	28	0.0851375	0.04149...	0.1915456...	Incorrect	0.019254585...	0.015232...	2.4786700669...	Sufficient	
306.0	106.0	35.39397963...	12.5374094...	28	0.0851375	0.04149...	0.1915456...	Incorrect	0.019254585...	0.015232...	2.4786700669...	Sufficient	
305.0	108.0	36.90552924...	12.0239114...	31	0.09425937...	0.04149...	0.2013541...	Incorrect	0.016246300...	0.013758...	2.4858128166...	Sufficient	
304.0	109.0	36.90552924...	12.0239114...	31	0.09425937...	0.04149...	0.2013541...	Incorrect	0.016246300...	0.013758...	2.4858128166...	Sufficient	
303.0	110.0	36.90552924...	12.0239114...	31	0.09425937...	0.04149...	0.2013541...	Incorrect	0.016246300...	0.013758...	2.4858128166...	Sufficient	

Close

FIG. 19

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Welding test #5 (on 7)

	test 1	test 2	test 3	test 4
Vincent Viau	5			
Sébastien Lapierre	4	5	5	7
Ezio Radeghi	6	7	7	
Raymond Tremblay	3	7	7	

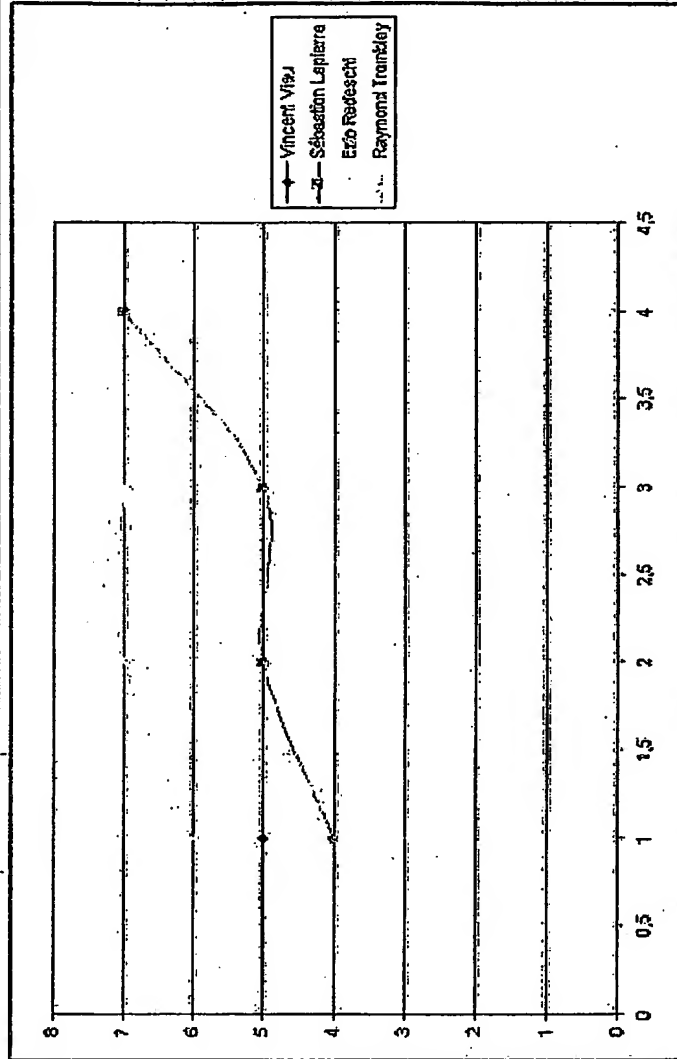


FIG. 20